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Attorney Docket No. 074313-0115

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Repp et al.
Title: QUILTING METHOD AND SYSTEM
Application No.: 10/799,298
Filing Date: 03/12/2004
Examiner: To be determined
Art Unit: 1771

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TRANSMITTAL

Transmitted herewith are the following documents for the above-identified application.

- [X] Information Disclosure Statement Under 37 C.F.R. § 1.56 (2 pages).
- [X] Form PTO-1449 (1 page) with a copy of one (1) listed reference.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date July 20, 2004

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Applicants: Repp, Jilene A.
Yogerst, Francis A.

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INFORMATION DISCLOSURE STATEMENT

Submitted herewith on Form PTO-1449 is a listing of a document known to the Applicants in order to comply with the Applicants' duty of disclosure. A copy of the listed document is being submitted to comply with the provisions of 37 C.F.R. § 1.97 and § 1.98.

The listed document is being submitted in compliance with 37 C.F.R. § 1.97(b), before the mailing date of the first Office Action on the merits.

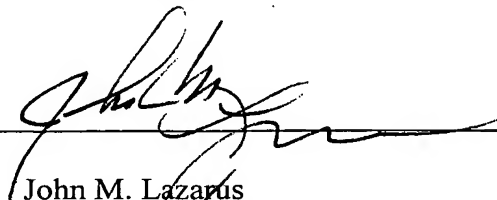
The Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with M.P.E.P. § 609.

Please direct all correspondence to the undersigned attorney at the address indicated below.

Respectfully submitted,

Date July 20, 2004

By

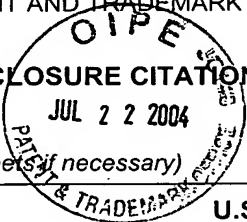


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074313-0115SERIAL NO.
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APPLICANTS

Repp et al.

FILING DATE

03/12/2004

GROUP ART UNIT

1771

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	A1						
	A2						
	A3						
	A4						
	A5						
	A6						
	A7						

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
	A8							
	A9							
	A10							
	A11							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	A12	Copy of U.S. Patent Application No. 10/196,643 as filed, July 15, 2002, (59 pages).
	A13	
	A14	
	A15	
	A16	

EXAMINER**DATE CONSIDERED**

- * **EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.



QUILTING METHOD AND SYSTEM

Inventors: JILENE A. REPP

FRANCIS A. YOGERST

QUILTING METHOD AND SYSTEM

BACKGROUND OF THE INVENTION

The present invention relates to a quilting method and system and particularly to a method and system for assembling of the top and bottom quilt covers to the opposite faces of a batting.

A quilt generally consists of a top cover and a bottom cover with an interposed soft batting. The upper or top cover may be formed by sewing small pieces to each other to form a decorative cover. The top and bottom covers are further interconnected in multiple spaced locations by various elements which pass through the batting to hold the batting in place and further contributes to the decorative effect.

In the prior art methods and systems, the covers are first manually secured to each other and the batting by safety pins, tacking usually with a special gun, a basting with needle, or application of a spray set active liquid glue to temporarily hold the cover in place during the forming of a final decorative cover, including a finished connection of the cover and batting. The temporary connections are then manually removed to finish the quilt. The attachment and removal are both tedious and time consuming.

Although widely used, an alternative simpler method and system has not been suggested in the prior art.

The present invention includes a novel and less tedious method and system for use in the craft of quilting.

SUMMARY OF THE INVENTION

Generally in accordance with the present invention, the covers are attached to the batting by an inactive adhesive which is activated after assembly of the batting and covers to secure the batting in the necessary position between the covers without the necessity for sewing or other known prior art means which generally require a manual time consuming task for creating and subsequent removal of the temporary attaching means. The inactive adhesive by proper selection may remain part of quilt or removed by washing or the like.

In a preferred method and system, the opposite surfaces of the batting are covered with a thin film of the inactive adhesive and preferably a heat activated inactive adhesive. The inactive adhesive is applied to the batting and the batting sold with the

adhesive thereon. Instructions for assembling the covers and activating the inactive adhesive, as by passing a hot iron over the cover are given to secure the cover to the batting. The quilt may then be completed by the known methods of connecting the covers and batting to produce the desired decorative covers.

5 In summary, an inactive adhesive is interposed between a quilt cover and the adjacent batting to at least temporarily attach the cover to the batting. The bonded quilt covers and batting are then fixedly attached to each other by the usual quilting method and systems to form a decorative cover. The inactive adhesive bonding is preferably applied to attach both covers to the batting for at least the temporary securing
10 of the covers for the subsequent known type of final securing the quilt covers to the inner batting without the prior art necessity of removing temporary connection means.

The inactive adhesive is preferably a heat activated material which is readily activated by the heat of a typical well-known hot ironing unit used for pressing clothing. Other energy or other activated adhesives may be used within the scope of the
15 invention but the heat activated adhesive using a typical hot iron will be readily understood by a typical quilter.

The system reduces the time to complete the quilt and particularly eliminates the time consuming and tedious steps of manually connecting the temporary attachment of the cover and the subsequent removal thereof.

20 BRIEF DESCRIPTION OF THE DRAWINGS

The drawings illustrate a preferred embodiment of the invention.

In the drawings:

Fig. 1 is a plan view of a quilt constructed in accordance with the present invention, with parts broken away to show detail of the construction;

25 Fig. 2 is a partial cross-section taken generally on line 2-2 of Fig. 1;

Fig. 3 is an enlarge partial view of the quilt in the process of forming the quilt of Fig. 1; and

Fig. 4 is a plan view of a batting forming a part of the quilt of Figs. 1-3.

DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

30 Referring to the drawings and particularly Figs. 1 and 2, a quilt is shown including top and bottom covers 1 and 2 separated by a central batting 3. The batting 3

is formed of relatively thick and soft material which is substantially thicker than the cloth covers 1 and 2. The outer edges of the quilt 1 are joined by a sewn connection 4 to enclose the batting 3. In addition, the covers and batting are joined by any of the various prior art methods to form a decorative quilt cover and is shown for purposes of illustration including a plurality of spaced connectors 5. Each connector 5 is a thread of yarn or other material, which secures the covers 1, 2 and the batting 3 together to hold the batting 3 in place and to form a decorative cover.

Figs. 1 and 2, as described above, generally illustrate a typical prior art quilt which is hand prepared by individuals in the quilting art. The covers 1 and 2 are formed of a suitable cloth and the batting 3 of the thicker and soft material. The one cover may be formed of small individual pieces, not shown, which are separately sewn together to form a highly decorative cover. In a typical prior quilting method, the covers and batting are temporarily joined by stitching, or other prior art means as discussed above, throughout the assembly to temporarily hold the covers and batting in place during the completing of connectors 5, after which the temporary attachment means is manually removed.

In accordance with the present invention, the quilt of Figs. 1 and 2 include adhesive connections 6 and 7 at the interfaces of covers 1 and 2 to the batting 3. As more fully developed hereinafter, adhesives 6 and 7 are applied throughout the interfaces in an inactive state and the adhesive is selected such as to remain part of the quilt or may be removed by hand or machine washing of the quilt or other suitable means.

More particularly, the batting 3 is preferably a preformed member with outer inactive adhesive coatings 6 and 7 applied to the faces of the batting, as more clearly shown in Fig. 3, which illustrates the members 1-3 assembled with the coatings 6 and 7 on the batting 3. The adhesive coatings 6 and 7 are relatively thin coatings and each is shown substantially enlarged for purposes of illustration. The coatings are such as to maintain a soft, flexible quilt if they are to remain a part of the final quilt. The inactive adhesive coating is activated after assembly with covers to form an active adhesive which joins the covers 1 and 2. A preferred adhesive is heat activated to convert the inactive adhesive to a bonding state.

In the process of forming the quilt, the covers 1 and 2 and the batting 3 are cut to the desired shape. The batting 3 has the inactive adhesives 6 and 7 on the opposite sides or faces. As shown in Fig. 3, the batting assembly of Fig. 3 is placed on a support 8, such as a table, with the adhesive 7 on the exposed top face. The cover 2 is placed, in proper alignment, on the batting 3. The coating is activated by heating. In a preferred method, a conventional hot electric iron unit 9 is applied over the entire surface of the cover 2. The heat of the iron activates the inactive adhesive 7 and fixes the cloth cover 2 to the batting 3. The batting 3 with the attached cover 2 is reversed upon table 8 and the cover 1 is aligned with the batting 3. The hot iron unit 9 is again moved over the cover 1, activating the inactive adhesive 6 on the abutting face of the batting to join the cover 6 to the batting 3.

The covers 1 and 2 are thereby sequentially fixed, at least temporarily, to the batting 3, and the assembly is ready to receive the connectors 5, which are attached in a conventional manner. Each illustrated connector 5 is generally a U-shaped thread 10 passing through the assembly and secured by a knot 10a to the quilt, as shown in Fig. 2, in accordance with one of the many prior art methods for forming a decorative covered quilt..

After all or a significant forming of the decorative cover, the partially finished quilt is completed by securing the edges as by the sewn connection 4.

The adhesive used is preferably a thin layer which maintains the complete flexibility and softness of the quilt, and is preferably a material which may be removed by washing or otherwise treating of the quilt.

More particularly, the adhesive 6-7 in the preferred construction is an adhesive such as sold under the trademark "Sol-U-Web" and manufactured and sold by Freudenburg Nonwoven Group of 20 Industrial Avenue, Chelmsford, Massachusetts 01824. The adhesive is a water soluble nonwoven adhesive material having an interlaced construction for bonding fabrics. The adhesive as applied to the batting 3 was a less concentrated version of the product as sold to the general public. The inactive adhesive is readily heat activated and may remain a part of the final quilt, or readily removed by hand or machine washing the quilt. Those skilled in the art can provide

other adhesives suitable for use in the present invention based on the teaching of the invention.

In the current construction of the batting, the adhesive is sprayed over the opposite faces of batting and forms a thin coating to mass produce batting with in-place
5 inactive adhesive. The batting is thus readily available in desirable sizes in a state for assembly to the covers by the quilting trade.

The above adhesive, or any other suitable inactive adhesive, could be supplied in the quilting market for appropriate application by the individual quilters. The factory mass produced product provides accurate control of the applied adhesive
10 and the benefits of mass production as well as quality control to produce an optimal system securing the covers to the batting.

The batting 3 may be of any suitable material such as presently used in quilting or others having the necessary softness, and which is compatible with the adhesive. Acceptable present day batting is of various types and generally includes
15 100% cotton, cotton and polyester blends and 100% polyester. Presently used batting has included 100% cotton and 100% polyester as well as 80% cotton/20% polyester, with various types of the 100% polyester batting identified as high loft, a low loft or a needle punch/traditional type. The above disclosed product as presently produced are typical construction and are not limited with respect to the scope of the present
20 invention.

The present invention has been found to produce a high quality quilt which is equal to or better than that produced with the time consuming and tedious prior art stitching or other means.

The preferred embodiment of the invention has been described using a
25 heat activated adhesive which is applied to the batting and which is then sold with proper instructions for use. Any other activatable adhesive may be used to form the adhesive covered batting sold as a unit for application by the quilter. The preferred embodiment has both surfaces of the batting fully covered. Further, the system may have the inactive adhesive applied by the quilter by a suitable spray unit or other
30 applicators which can establish the desired inactive adhesive coating. Although not considered as a particularly practical system, a thin adhesive film may be applied to the

cloth cover. However, this would normally require care in the application and would not provide the final advantages of the preferred systems disclosed in the preferred embodiment and the other possible variations discussed above. The inactive adhesive may also be applied in various patterns which do not form a complete and continuous adhesive over the batting face, but which properly secure the covers and batting to permit application of the desired decorative cover. In summary, the preferred embodiment provides a most effective and useful inactive adhesive cover attachment for producing the necessary final decorative connection of the covers to the batting in the quilting art. However, variations of the method of producing and applying an effective inactive adhesive type for subsequent assembly during the quilting steps of attaching the covers to the batting may be found by those skilled in the art based on the teaching herein and are within the scope and teaching of the present invention and accompanying claims.

7
CLAIMS

We claim:

1. A method of making a quilt, comprising forming top and bottom covers, forming a batting having top and bottom facing for location between said covers, said batting having an inactive adhesive on said top and bottom faces, assembling said batting between said top and bottom covers with said inactive adhesive abutting said top and bottom covers for securing said covers to said batting, and securing said covers to said batting to form a quilt with a decorative cover.
2. The method of claim 1 wherein said inactive adhesive is a heat activated adhesive, and including the step of heating said covers to activate the inactive adhesive and thereby secure the covers to said batting.
3. The method of claim 2 wherein the step of heating said inactive adhesive includes moving a hot iron over said covers.
4. The method of claim 2 wherein said inactive adhesive covers substantially the complete top and bottom facings of said batting.
5. The method of claim 1 wherein said inactive adhesive is water soluble for removal thereof by washing the quilt after said tying step.
6. The method of claim 1 wherein said inactive adhesive is a water soluble nonwoven material having an interlaced construction.
7. The method of claim 1 wherein said inactive adhesive is a heat activated adhesive, and including the steps of supporting the assembly of said batting and covers on a support with a cover exposed, heating said exposed cover to activate the adhesive and secure the cover to the batting, reversing said assembly to expose the opposite cover, and heating said last named cover to activate the adhesive and secure the last named cover to the batting.
8. The method of claim 7 wherein said heating is established by moving an hot ironing unit over said covers.
9. The method of claim 7 wherein said step of securing said batting includes forming a decorative connecting means.
10. A method of forming a quilt having first and second covers separated by an inner batting between said covers, comprising locating inactive adhesive between

each of said covers and said batting to attach said covers to the opposite sides of said batting, and securing said covers and batting together at a plurality of spaced locations
 5 extended through said covers for forming a decorative connecting means

11. The method of claim 10 wherein said inactive adhesive includes a thin coating between the opposed faces of said batting and said covers.

12. The method of claim 11, wherein said inactive adhesive is sprayed on said batting.

13. The method of claim 12 wherein said inactive adhesive dissolves in water and including the step of washing said quilt in water to remove said adhesive subsequent to forming said decorative connecting means.

14. The method of claim 10 wherein said inactive adhesive is a heat activated adhesive.

15. A quilt batting member for securement between top and bottom cloth covers of a quilt and configured for having connecting means passed through the covers and batting member, said batting member including a soft thick material, the improvement in said batting member comprising an inactive adhesive on the opposed
 5 faces of said batting member for abutting said covers, said adhesive being activated when engaging said covers to attach the batting member to said covers.

16. The quilt batting member of claim 15 wherein said inactive adhesive is a heat activated adhesive.

17. The quilt batting member of claim 15 wherein said inactive adhesive substantially covers the complete interface of said batting.

18. The quilt batting member of claim 15 wherein said activated adhesive is water soluble.

19. The quilt batting member of claim 16 wherein said adhesive substantially covers the total interface of said batting member.

20. The quilt batting member of claim 19 wherein said adhesive is water soluble, said adhesive is activated by passing a hot iron over the batting.

QUILTING METHOD AND SYSTEM

ABSTRACT OF THE DISCLOSURE

A method of making a quilt includes a batting including a heat activated adhesive coating each side or faces of the batting. The quilt covers are attached to the
5 batting by sequentially placing the covers onto the respective batting faces and heating each cover and adjacent adhesive by moving a hot iron over each cover. The covers are connected to each by a plurality of spaced yarn or other suitable decorative connecting means which extend through the covers and batting to secure the batting in place and may form a desired decorative pattern. The inactive adhesive remains in the quilt or is
10 removed by washing of the quilt. The batting with the inactive adhesive is provided as a commercially available product.

FIG. 1

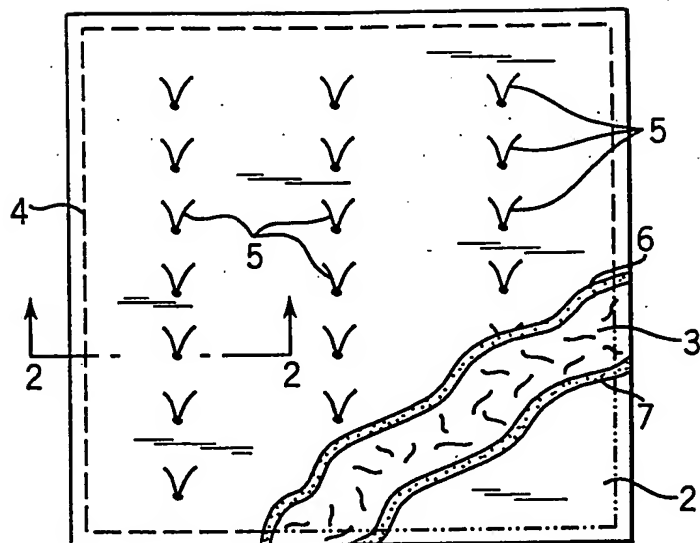


FIG. 2

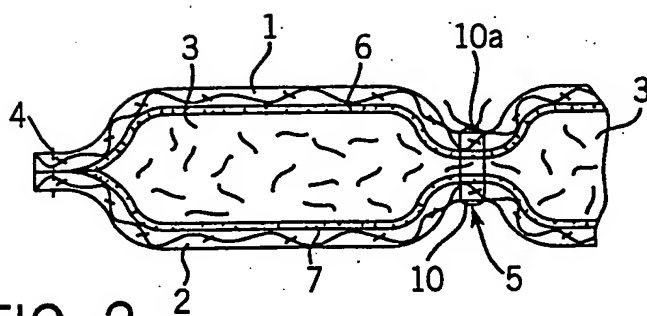


FIG. 4

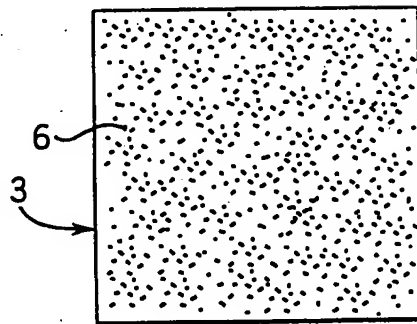
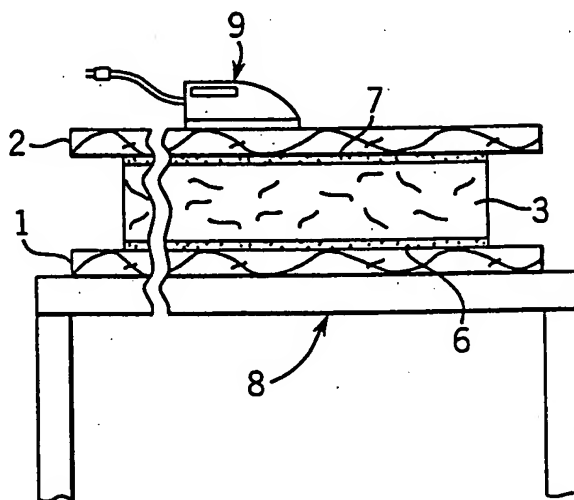


FIG. 3



1/1

FIG. 1

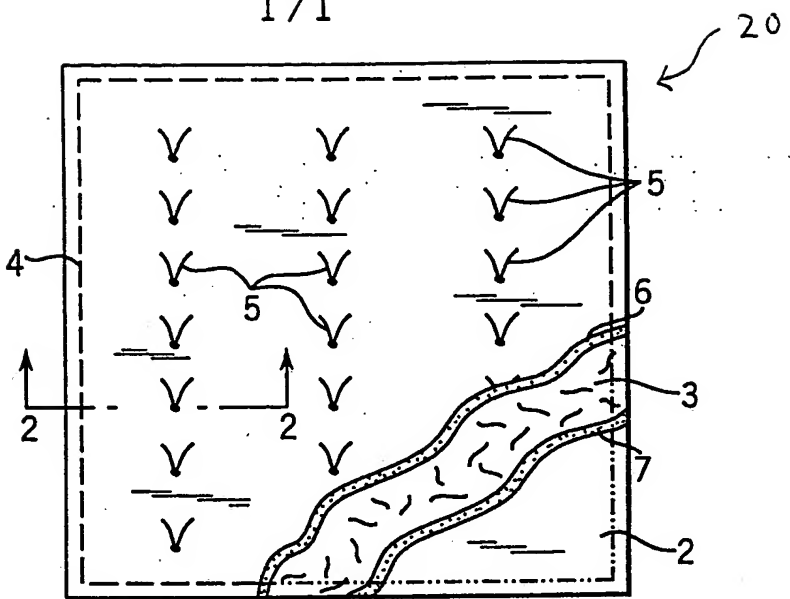


FIG. 2

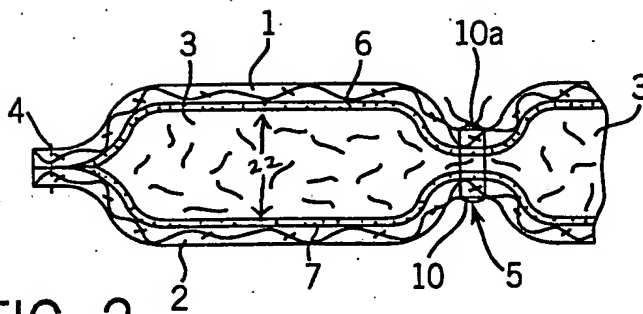


FIG. 4

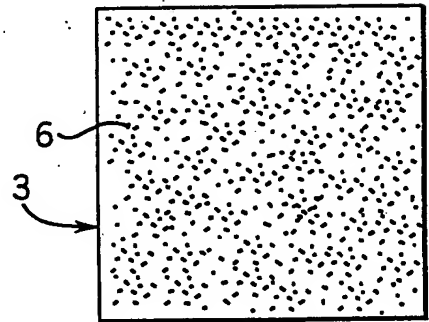
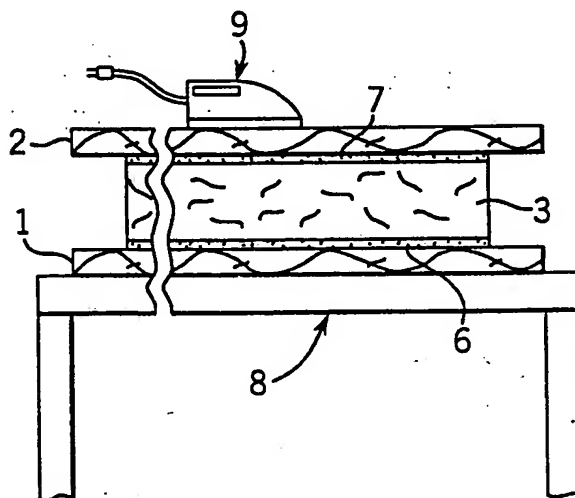


FIG. 3



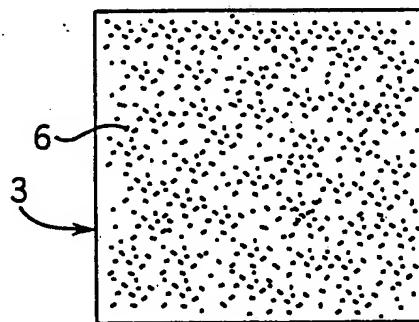
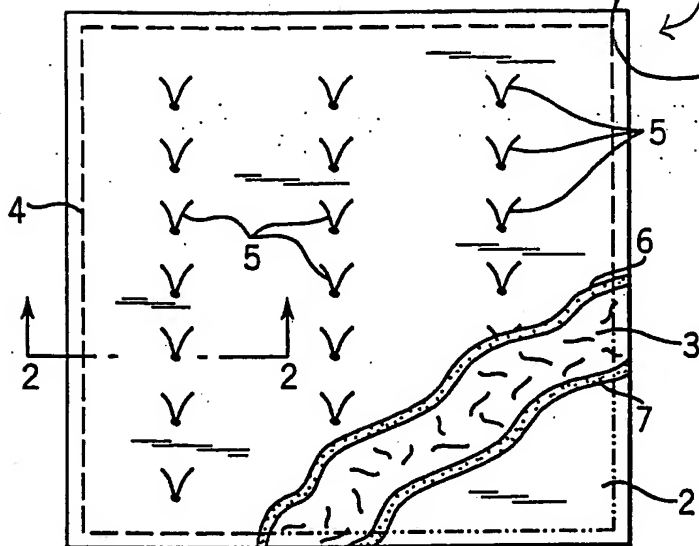


FIG. 4

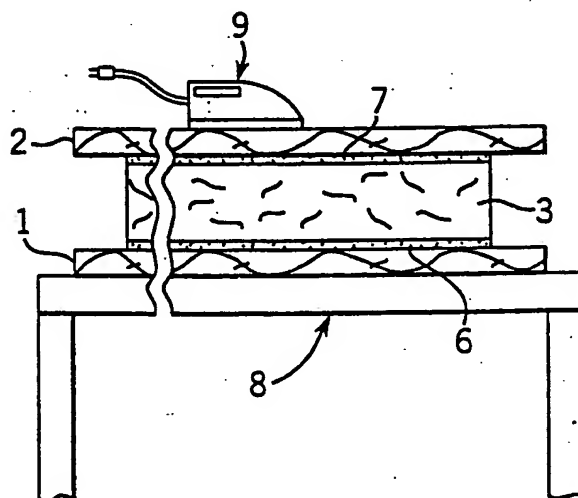


FIG. 3



QUILTING METHOD AND SYSTEM

SUBSTITUTE SPECIFICATION

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

[0001] The present application is a continuation of Application No. 09/900,927, filed July 9, 2001, which is a division of Application No. 09/521,810, filed March 9, 2000, which issued as U.S. Patent No. 6,261,397 on July 17, 2001 both of which are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

[0002] A quilt generally consists of a top cover and a bottom cover with an interposed soft batting. The upper or top cover may be formed by sewing small pieces (of cloth) to each other to form a decorative cover. The top cover and bottom cover are further interconnected in multiple spaced locations by various elements (such as stitching of yarn or thread) which pass through the batting to hold the batting in place; these elements may further contribute to the decorative effect.

[0003] It is known to use a method of quilting wherein the covers are first manually secured to each other and the batting with temporary connections in the form of safety pins, tacking usually with a special gun, a basting with needle, or application of a spray set active liquid glue to temporarily hold the cover in place during the forming of the decorative cover (i.e., forming a finished quilt with a connection of the cover and batting). The temporary connections are then manually removed to finish the quilt. The attachment and removal of such temporary connections tends to be both tedious and time consuming.

[0004] It would be advantageous to provide a quilting method and system and particularly to a method and system for assembling of the top and bottom quilt covers to the opposite faces of a batting that is less tedious and time consuming.

SUMMARY OF THE INVENTION

[0005] The present invention relates to an improvement in a batting of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes at least one cover to be securably attached to the batting. The improvement includes an adhesive provided with the batting so that the at least one cover can be attached to the batting during formation of the quilt.

[0006] The present invention further relates to an improvement in a batting of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes covers to be attached to the batting as a commercially available product sold in a size to form the quilt. The improvement includes an adhesive provided with the batting so that the covers can be attached to the batting during formation of the quilt.

[0007] The present invention further relates to an improvement in a batting of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes at least one cover to be attached to the batting having opposing faces. The improvement includes an adhesive provided with the batting so that the at least one cover can be attached to the batting during formation of the quilt. The batting with the adhesive is sold as a commercially available product in at least one desirable size for formation of the quilt.

[0008] The present invention further relates to an improvement in a commercially available product of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes at least one cover to be securably attached to the batting. The improvement

includes a batting sold in at least one desirable size for making a quilt. The improvement also includes an adhesive provided with the batting. The quilt may be formed by at least temporary attachment of the at least one cover to the batting by the adhesive.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIGURE 1 is a fragmentary top plan view of a quilt (with parts broken away to show detail of the construction) according to an exemplary embodiment of the system and method.

[0010] FIGURE 2 is a fragmentary cross-section side elevation view of the quilt taken generally on line 2--2 of FIGURE 1.

[0011] FIGURE 3 is an enlarged partial view of the quilt of FIGURE 1.

[0012] FIGURE 4 is a top plan view of a batting forming a part of the quilt of FIGURES 1-3.

DESCRIPTION OF PREFERRED AND OTHER EXEMPLARY EMBODIMENTS

[0013] Referring to FIGURES 1 and 2, a quilt 20 is shown. Quilt 20 includes a top cover 1 and a bottom cover 2 separated by a central batting 3. As shown, batting 3 is formed of relatively thick and soft material. The batting has a thickness 22 which is substantially thicker than the cloth of top cover 1 and bottom cover 2. The outer edges of the quilt 20 are joined by a sewn connection 4 to enclose batting 3. According to any preferred embodiment, the covers and the batting are joined (by any of various methods) to form a decorative quilt cover (shown for purposes of illustration as including a plurality of spaced connectors 5). Each connector 5 is a thread of yarn or other material, which secures covers 1 and 2 and batting 3 together to form a decorative cover.

[0014] FIGURES 1 and 2 generally illustrate a typical quilt which may be hand prepared by individuals. Covers 1 and 2 are formed of a suitable cloth and batting 3 of a thicker and soft material. One cover may be formed of small individual pieces (not shown) which are separately sewn together to form a highly decorative cover. The covers and the batting are joined by temporary attachment (e.g., stitching or pins according to known methods) throughout the assembly temporarily to hold the covers and the batting in place during the completing (sewing) of the connector (after which the temporary attachment is manually removed). In the process of forming the quilt, covers and the batting are cut to the desired shape.

[0015] In accordance with an exemplary embodiment of the system and method shown in FIGURES 1 and 2, the quilt will include adhesive connections 6 and 7 at the interfaces of covers 1 and 2 to batting 3. Adhesive interfaces 6 and 7 are provided between batting 3 and covers 1 and/or 2; the adhesive may be selected such as to remain part of the quilt or may be removable by hand or machine washing of the quilt or other suitable means.

[0016] According to a particularly preferred embodiment, batting 3 is a preformed member with outer inactive adhesive coatings 6 and 7 applied to the faces on batting 3; adhesive interfaces 6 and 7 are relatively thin coatings (each is shown substantially enlarged for purposes of illustration). The coatings are such as to maintain a soft, flexible quilt if they are to remain a part of the final quilt. According to a particularly preferred embodiment, the inactive adhesive coating (interface) is activated after assembly with covers to form an active adhesive connection which joins the covers to the batting; the adhesive is heat activated to convert the inactive adhesive to a bonding state.

[0017] According to a particularly preferred embodiment, batting 3 has inactive adhesives 6 and 7 on the opposite sides or faces. As

shown in FIGURE 3, the batting assembly is placed on a support 8 (such as a table) with adhesive 7 on the exposed top face. Cover 2 is placed (in proper alignment) on batting 3. The coating is activated by heating.

According to a particularly preferred embodiment, a conventional hot electric iron unit 9 is applied over the entire surface of cover 2. The heat of iron unit 9 activates inactive adhesive 7 and fixes cloth cover 2 to batting 3. Batting 3 with attached cover 2 is reversed upon table 8 and cover 1 is aligned with batting 3. Hot iron unit 9 is again moved over cover 1, activating inactive adhesive 6 on the abutting face of the batting to join cover 6 to batting 3.

[0018] Covers 1 and 2 are thereby sequentially fixed (at least temporarily) to batting 3, and the assembly is ready to receive connectors 5 (which are attached in a conventional manner). As shown in the FIGURES, according to a particularly preferred embodiment, connector 5 is generally a U-shaped thread 10 passing through the quilt assembly and secured by a knot 10a (as shown in FIGURE 2). According to any exemplary embodiment, the quilt assembly may be constructed in accordance with one of the many conventional methods for forming a decorative covered quilt. After all or a significant forming of the decorative cover, the partially finished quilt is completed by securing the edges as by the sewn connection.

[0019] The adhesive used is preferably a thin layer which maintains the complete flexibility and softness of the quilt, and is preferably a material which may be removed by washing or otherwise treating of the quilt.

[0020] According to a particularly preferred embodiment, the adhesive is an adhesive such as sold under the trademark "Sol-U-Web" and commercially available from Freudenburg Nonwoven Group of 20 Industrial Avenue, Chelmsford, Massachusetts. The adhesive is a water soluble nonwoven adhesive material having an inter-laced construction for

bonding fabrics (or a less concentrated version of the adhesive as sold to the general public). The inactive adhesive is heat activated and may remain a part of the final quilt, or may be removed by hand or machine washing the quilt. According to other alternative embodiments, other adhesives suitable for use in the system and method may be used according to the teaching of the present invention.

[0021] In the construction of the batting according to a preferred embodiment, the adhesive is sprayed over the opposite faces of batting and forms a thin coating (suitable for a mass produce batting with in-place inactive adhesive). According to an exemplary embodiment, the batting is readily available in desirable sizes in a state for assembly to the covers by the quilting trade. The batting with adhesive is sold as a commercially available product. The activatable adhesive (or any other suitable inactive adhesive) may be supplied in the quilting market for appropriate application by the individual quilters. The factory mass-produced batting product provides accurate control of the applied adhesive and the benefits of mass production as well as quality control to produce an optimal system securing the covers to the batting.

[0022] The batting may be of any suitable material such as presently used in quilting or others having the necessary softness, and which is compatible with the adhesive. Acceptable present day batting is of various types and generally includes 100 percent cotton, cotton and polyester blends and 100 percent polyester. According to a particularly preferred embodiment, the batting has included 100 percent cotton and 100 percent polyester as well as 80 percent cotton/20 percent polyester; various other types of the 100 percent polyester batting may be identified as high loft, a low loft or a needle punch/traditional type. According to alternative embodiments, the batting product as presently produced are typical construction and are not limited with respect to the scope of the present system and method.

[0023] According to any preferred embodiment of the present invention, a high quality quilt may be produced which is equal to or better in quality than that produced with the time consuming and tedious prior art stitching or other methods.

[0024] According to a preferred embodiment of the system and method, a heat activated adhesive is applied to the batting which is then sold with proper instructions for use. The instructions may provide for assembling the covers and activating the adhesive, as by passing a hot iron over the cover are given to secure the cover to the batting. Any other activatable adhesive may be used to form the adhesive covered batting sold as a unit for application by the quilter. According to a preferred embodiment of the system and method, both surfaces of the batting are fully covered with adhesive. According to other alternative embodiments, the system may have the adhesive applied by the quilter by a suitable spray unit or other applicators which can establish the desired adhesive coating. According to other alternative embodiments (not considered as a particularly practical system), a thin adhesive film may be applied to the cloth cover (which would normally require care in the application and would not provide the final advantages of the system and method disclosed as the preferred embodiment and the other possible variations). The inactive adhesive may also be applied in various patterns which do not form a complete and continuous adhesive over the batting face, but which properly secure the covers and batting to permit application of the desired decorative cover.

[0025] Generally in accordance with a preferred embodiment of the system and method of the present invention, the covers are attached to the batting by an inactive adhesive which is activated after assembly of the batting and covers to secure the batting in the necessary position between the covers without the necessity for sewing or other known prior art means which generally require a manual time consuming task for

creating and subsequent removal of the temporary attaching means. The inactive adhesive by proper selection may remain part of quilt or removed by washing or the like.

[0026] According to a preferred embodiment of the method and system, the opposite surfaces of the batting are covered with a thin film of the inactive adhesive and preferably a heat activated inactive adhesive. The inactive adhesive is applied to the batting and the batting sold with the adhesive thereon. Instructions for assembling the covers and activating the inactive adhesive, as by passing a hot iron over the cover are given to secure the cover to the batting. The quilt may then be completed by the known methods of connecting the covers and batting to produce the desired decorative covers.

[0027] According to any preferred embodiment of the system and method, an adhesive is interposed between a quilt cover and the adjacent batting to at least temporarily attach the cover to the batting. The bonded quilt covers and batting are then fixedly attached to each other by the usual quilting method and systems to form a decorative cover. The adhesive bonding is preferably applied to attach both covers to the batting for at least the temporary securing of the covers for any subsequent type of final securing the covers to the batting.

[0028] According to a particularly preferred embodiment, the adhesive is a heat activated material which is readily activated by the heat of a typical well-known hot ironing unit used for pressing clothing. Other energy or other adhesives may be used within the system and method; the heat activated adhesive using a typical hot iron will be readily understood by a typical quilter.

[0029] The system and method is intended to reduce the time to complete the quilt and to particularly eliminate the time consuming and tedious steps of manually connecting the temporary attachment of the cover and the subsequent removal of the temporary attachment.

[0030] According to any preferred embodiment, the system and method will provide a most effective and useful temporary adhesive cover attachment for producing the necessary final decorative connection of the covers to the batting. However, variations of the method of producing and applying an effective adhesive type for subsequent assembly during the quilting steps of attaching the covers to the batting may be found by those skilled in the art who may review this disclosure and are intended to be within the scope and teaching of the present invention and accompanying claims.

ABSTRACT

A batting of a type having opposing faces and a softness and a flexibility and configured for use in the formation of a quilt is disclosed. The quilt may have at least one cover to be securably attached to the
5 batting. An adhesive provided is with the batting so that the cover can be attached to the batting during formation of the quilt. The batting with the adhesive may be sold as a commercially available product in at least one desirable size for formation of the quilt. The batting may comprise a
10 cotton material, or a polyester material, or a cotton and polyester material. The adhesive provided with the batting may be configured to be selectively activated when applying the cover for attachment to the batting. The adhesive provided with the batting may be removed by a treatment. The commercial product may include instructions for the use of the batting.



QUILTING METHOD AND SYSTEM

MARKED-UP SUBSTITUTE SPECIFICATION

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

[0001] The present application is a continuation of Application No. 09/900,927, filed July 9, 2001, which is a division of Application No. 09/521,810, filed March 9, 2000, which issued as U.S. Patent No. 6,261,397 on July 17, 2001 both of which are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

[0002] [The present invention relates to a quilting method and system and particularly to a method and system for assembling of the top and bottom quilt covers to opposite faces of a batting.] A quilt generally consists of a top cover and a bottom cover with an interposed soft batting. The upper or top cover may be formed by sewing small pieces (of cloth) to each other to form a decorative cover. The top cover and bottom cover are further interconnected in multiple spaced locations by various elements (such as stitching of yarn or thread) which pass through the batting to hold the batting in place; these elements may [and] further contribute[s] to the decorative effect.

[0003] It is known to use a method of quilting wherein [In the prior art methods and systems,] the covers are first manually secured to each other and the batting with temporary connections in the form of [by] safety pins, tacking usually with a special gun, a basting with needle, or application of a spray set active liquid glue to temporarily hold the cover in place during the forming of the decorative cover (i.e., forming [including] a finished quilt with a connection of the cover and batting).

The temporary connections are then manually removed to finish the quilt. The attachment and removal of such temporary connections tends to be [are] both tedious and time consuming.

[0004] [Although widely used, an alternative simpler method and system has not been suggested in the prior art. The present invention includes a novel and less tedious method and system for use in the craft of quilting.] It would be advantageous to provide a quilting method and system and particularly to a method and system for assembling of the top and bottom quilt covers to the opposite faces of a batting that is less tedious and time consuming.

SUMMARY OF THE INVENTION

[0005] [Generally in accordance with the present invention, the covers are attached to the batting by an inactive adhesive which is activated after assembly of the batting and covers to secure the batting in the necessary position between the covers without the necessity for sewing or other known prior art means which generally require a manual time consuming task for creating and subsequent removal of the temporary attaching means. The inactive adhesive by proper selection may remain part of quilt or removed by washing or the like.] The present invention relates to an improvement in a batting of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes at least one cover to be securably attached to the batting. The improvement includes an adhesive provided with the batting so that the at least one cover can be attached to the batting during formation of the quilt.

[0006] [In a preferred method and system, the opposite surfaces of the batting are covered with a thin film of the inactive adhesive and preferably a heat activated inactive adhesive. The inactive adhesive is applied to the batting and the batting sold with the adhesive thereon.

Instructions for assembling the covers and activating the inactive adhesive, as by passing a hot iron over the cover are given to secure the cover to the batting. The quilt may then be completed by the known methods of connecting the covers and batting to produce the desired decorative covers.] The present invention further relates to an improvement in a batting of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes covers to be attached to the batting as a commercially available product sold in a size to form the quilt. The improvement includes an adhesive provided with the batting so that the covers can be attached to the batting during formation of the quilt.

[0007] [In summary, an inactive adhesive is interposed between a quilt cover and the adjacent batting to at least temporarily attach the cover to the batting. The bonded quilt covers and batting are then fixedly attached to each other by the usual quilting methods and systems to form a decorative cover. The inactive adhesive bonding is preferably applied to attach both covers to the batting for at least the temporary securing of the covers for the subsequent known type of final securing the quilt covers to the inner batting without the prior art necessity of removing temporary connection means.] The present invention further relates to an improvement in a batting of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes at least one cover to be attached to the batting having opposing faces. The improvement includes an adhesive provided with the batting so that the at least one cover can be attached to the batting during formation of the quilt. The batting with the adhesive is sold as a commercially available product in at least one desirable size for formation of the quilt.

[0008] [The inactive adhesive is preferably a heat activated material which is readily activated by the heat of a typical well-known hot ironing unit used for pressing clothing. Other energy or other activated

adhesives may be used within the scope of the invention but the heat activated adhesive using a typical hot iron will be readily understood by a typical quilter.] The present invention further relates to an improvement in a commercially available product of a type having a softness and flexibility and configured for use in the formation of a quilt. The quilt includes at least one cover to be securably attached to the batting. The improvement includes a batting sold in at least one desirable size for making a quilt. The improvement also includes an adhesive provided with the batting. The quilt may be formed by at least temporary attachment of the at least one cover to the batting by the adhesive. [The system reduces the time to complete the quilt and particularly eliminates the time consuming and tedious steps of manually connecting the temporary attachment of the cover and the subsequent removal thereof.]

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] [The drawings illustrate a preferred embodiment of the invention. In the drawings:] FIGURE 1 is a fragmentary top plan view of a quilt[,] (with parts broken away to show detail of the construction) according to an exemplary embodiment of the system and method. [;]

[0010] FIGURE 2 is a fragmentary cross-section side elevation view of the quilt [partial cross-section] taken generally on line 2--2 of FIGURE 1. [;]

[0011] FIGURE 3 is an enlarged partial view of the quilt [in the process of forming the quilt] of FIGURE 1. [and;]

[0012] FIGURE 4 is a top plan view of a batting forming a part of the quilt of FIGURES 1-3.

DESCRIPTION OF PREFERRED AND OTHER EXEMPLARY EMBODIMENTS
[THE ILLUSTRATED EMBODIMENT]

[0013] Referring to FIGURES 1 and 2, a quilt 20 is shown. Quilt 20 includes a top cover 1 and a bottom cover 2 separated by a central batting 3. As shown, [The] batting 3 is formed of relatively thick and soft material. The batting has a thickness 22 which is substantially thicker than the cloth of top cover 1 and bottom cover 2. The outer edges of the quilt 20 [1] are joined by a sewn connection 4 to enclose batting 3. According to any preferred embodiment [In addition], the covers and the batting are joined (by any of various methods) to form a decorative quilt cover (shown for purposes of illustration as including a plurality of spaced connectors 5). Each connector 5 is a thread of yarn or other material, which secures covers 1 and 2 and batting 3 together to form a decorative cover.

[0014] FIGURES 1 and 2 [, as described above] generally illustrate a typical [prior art] quilt which may be hand prepared by individuals [in the quilting art]. [The] Covers 1 and 2 are formed of a suitable cloth and batting 3 of a thicker and soft material. [The] One cover may be formed of small individual pieces (not shown) which are separately sewn together to form a highly decorative cover. [In a typical prior quilting method,] The covers and the batting are [temporarily] joined by temporary attachment (e.g., stitching or pins according to known methods) throughout the assembly temporarily to hold the covers and the batting in place during the completing (sewing) of the connector (after which the temporary attachment is manually removed). In the process of forming the quilt, covers and the batting are cut to the desired shape.

[0015] In accordance with an exemplary embodiment of the system and method shown in [the present invention, the quilt of] FIGURES 1 and 2, the quilt will include adhesive connections 6 and 7 at

the interfaces of covers 1 and 2 to batting 3. [As more fully developed hereinafter,] Adhesive interfaces 6 and 7 are provided between batting 3 and covers 1 and/or 2; [are applied throughout the interfaces in an inactive states and] the adhesive may be selected such as to remain part of the quilt or may be removable by hand or machine washing of the quilt or other suitable means.

[0016] According to a particularly preferred embodiment [More particularly], [the] batting 3 is [preferably] a preformed member with outer inactive adhesive coatings 6 and 7 applied to the faces on batting 3; adhesive interfaces 6 and 7 are relatively thin coatings (each is shown substantially enlarged for purposes of illustration). The coatings are such as to maintain a soft, flexible quilt if they are to remain a part of the final quilt. According to a particularly preferred embodiment, the inactive adhesive coating (interface) is activated after assembly with covers to form an active adhesive connection which joins the covers to the batting; the adhesive is heat activated to convert the inactive adhesive to a bonding state [1 and 2].

[0017] According to a particularly preferred embodiment [More particularly], batting 3 has inactive adhesives 6 and 7 on the opposite sides or faces [of the batting, as more clearly shown in Fig. 3, which illustrates the members 1-3 assembled with the coatings 6 and 7 on the batting 3]. As shown in FIGURE 3, the batting assembly is placed on a support 8 (such as a table) with adhesive 7 on the exposed top face. Cover 2 is placed (in proper alignment) on batting 3. The [inactive adhesive] coating is activated by heating. According to a particularly preferred embodiment, a conventional hot electric iron unit 9 is applied over the entire surface of cover 2. The heat of iron unit 9 activates inactive adhesive 7 and fixes cloth cover 2 to batting 3. Batting 3 with attached cover 2 is reversed upon table 8 and cover 1 is aligned with

batting 3. Hot iron unit 9 is again moved over cover 1, activating inactive adhesive 6 on the abutting face of the batting to join cover 6 to batting 3.

[0018] [In the process of forming the quilt,] Covers 1 and 2 [add the batting 3 are cut to the desired shape.] are thereby sequentially fixed (at least temporarily) to batting 3, and the assembly is ready to receive connectors 5 (which are attached in a conventional manner). As shown in the FIGURES, according to a particularly preferred embodiment, connector 5 is generally a U-shaped thread 10 passing through the quilt assembly and secured by a knot 10a (as shown in FIGURE 2). According to any exemplary embodiment, the quilt assembly may be constructed in accordance with one of the many conventional methods for forming a decorative covered quilt. After all or a significant forming of the decorative cover, the partially finished quilt is completed by securing the edges as by the sewn connection.

[0019] The adhesive used is preferably a thin layer which maintains the complete flexibility and softness of the quilt, and is preferably a material which may be removed by washing or otherwise treating of the quilt.

[0020] According to a particularly preferred embodiment [More particularly], the adhesive is an adhesive such as sold under the trademark "Sol-U-Web" and commercially available from Freudenburg Nonwoven Group of 20 Industrial Avenue, Chelmsford, Massachusetts. The adhesive is a water soluble nonwoven adhesive material having an inter-laced construction for bonding fabrics (or a less concentrated version of the adhesive as sold to the general public). The inactive adhesive is [readily] heat activated and may remain a part of the final quilt, or may be removed by hand or machine washing the quilt. According to other alternative embodiments [Those skilled in the art can provide], other adhesives suitable for use in the system and method may be used according to the teaching of the present invention.

[0021] In the [current] construction of the batting according to a preferred embodiment, the adhesive is sprayed over the opposite faces of batting and forms a thin coating (suitable for a mass produce batting with in-place inactive adhesive). According to an exemplary embodiment, the batting is readily available in desirable sizes in a state for assembly to the covers by the quilting trade. The batting with adhesive is sold as a commercially available product. The activatable adhesive (or any other suitable inactive adhesive) [could] may be supplied in the quilting market for appropriate application by the individual quilters. The factory mass-produced batting product provides accurate control of the applied adhesive and the benefits of mass production as well as quality control to produce an optimal system securing the covers to the batting.

[0022] The batting [3] may be of any suitable material such as presently used in quilting or others having the necessary softness, and which is compatible with the adhesive. Acceptable present day batting is of various types and generally includes 100 percent cotton, cotton and polyester blends and 100 percent polyester. According to a particularly preferred embodiment, [Presently used batting includes] the batting has included 100 percent cotton and 100 percent polyester as well as 80 percent cotton/20 percent polyester; various other types of the 100 percent polyester batting may be identified as high loft, a low loft or a needle punch/traditional type. According to alternative embodiments [The above disclosed product], the batting product as presently produced are typical construction and are not limited with respect to the scope of the present system and method [invention].

[0023] According to any preferred embodiment of the present invention, [The present invention has been found to produce] a high quality quilt may be produced which is equal to or better in quality than that produced with the time consuming and tedious prior art stitching or other methods.

[0024] According to a [The] preferred embodiment of the system and method [invention], a heat activated adhesive is applied to the batting which is then sold with proper instructions for use. Any other activatable adhesive may be used to form the adhesive covered batting sold as a unit for application by the quilter. According to a [The] preferred embodiment of the system and method, [has] both surfaces of the batting are fully covered with adhesive. According to other alternative embodiments [Further], the system may have the adhesive applied by the quilter by a suitable spray unit or other applicators which can establish the desired adhesive coating. According to other alternative embodiments (not considered as a particularly practical system) [Although not considered as a particularly practical system], a thin adhesive film may be applied to the cloth cover (which [this] would normally require care in the application and would not provide the final advantages of the system and method disclosed as the preferred embodiment and the other possible variations). The inactive adhesive may also be applied in various patterns which do not form a complete and continuous adhesive over the batting face, but which properly secure the covers and batting to permit application of the desired decorative cover.

[0025] Generally in accordance with a preferred embodiment of the system and method of the present invention, the covers are attached to the batting by an inactive adhesive which is activated after assembly of the batting and covers to secure the batting in the necessary position between the covers without the necessity for sewing or other known prior art means which generally require a manual time consuming task for creating and subsequent removal of the temporary attaching means. The inactive adhesive by proper selection may remain part of quilt or removed by washing or the like.

[0026] According to a preferred embodiment of the method and system, the opposite surfaces of the batting are covered with a thin film

of the inactive adhesive and preferably a heat activated inactive adhesive. The inactive adhesive is applied to the batting and the batting sold with the adhesive thereon. Instructions for assembling the covers and activating the inactive adhesive, as by passing a hot iron over the cover are given to secure the cover to the batting. The quilt may then be completed by the known methods of connecting the covers and batting to produce the desired decorative covers.

[0027] According to any preferred embodiment of the system and method, an adhesive is interposed between a quilt cover and the adjacent batting to at least temporarily attach the cover to the batting. The bonded quilt covers and batting are then fixedly attached to each other by the usual quilting method and systems to form a decorative cover. The adhesive bonding is preferably applied to attach both covers to the batting for at least the temporary securing of the covers for any subsequent type of final securing the covers to the batting.

[0028] According to a particularly preferred embodiment, the adhesive is a heat activated material which is readily activated by the heat of a typical well-known hot ironing unit used for pressing clothing. Other energy or other adhesives may be used within the system and method; the heat activated adhesive using a typical hot iron will be readily understood by a typical quilter.

[0029] The system and method is intended to reduce the time to complete the quilt and to particularly eliminate the time consuming and tedious steps of manually connecting the temporary attachment of the cover and the subsequent removal of the temporary attachment.

[0030] According to any preferred embodiment [In summary], the system and method will provide [the preferred embodiment provides] a most effective and useful temporary adhesive cover attachment for producing the necessary final decorative connection of the covers to the batting. However, variations of the method of producing and applying an

effective adhesive type for subsequent assembly during the quilting steps of attaching the covers to the batting may be found by those skilled in the art who may review this disclosure and are intended to be within the scope and teaching of the present invention and accompanying claims.

ABSTRACT

[A method of making a quilt includes a batting including an adhesive with the batting. The quilt covers are attached to the batting by sequentially placing the covers onto the respective batting faces. The adhesive may be activatable and activated by heating each cover by moving a hot iron over each cover. The covers are connected to each by a plurality of spaced yarn or other suitable decorative connecting means which extend through the covers and batting to secure the batting in place and may form a desired decorative pattern. The adhesive remains in the quilt or is removed by washing of the quilt. The batting with the adhesive is provided as a commercially available product.]

A batting of a type having opposing faces and a softness and a flexibility and configured for use in the formation of a quilt is disclosed. The quilt may have at least one cover to be securably attached to the batting. An adhesive provided is with the batting so that the cover can be attached to the batting during formation of the quilt. The batting with the adhesive may be sold as a commercially available product in at least one desirable size for formation of the quilt. The batting may comprise a cotton material, or a polyester material, or a cotton and polyester material. The adhesive provided with the batting may be configured to be selectively activated when applying the cover for attachment to the batting. The adhesive provided with the batting may be removed by a treatment. The commercial product may include instructions for the use of the batting.